

SPECIAL PACKAGING INSTRUCTION

MIL-STD-2073-1

(CONTINUATION SHEET)

21849

01-340-6657

PART OR DRAWING NO.

NATIONAL STOCK NO.

DATE

REVISION

23831

1630-01-340-6657

9/259

OUP
001ICO
000UNIT PACK
WT 45.8UNIT PACK CUBE
0.694UNIT PACK SIZE
12.4 12.4 7.8

SHEET 1 OF 1

PRESERVATION

LEVEL A - MIL-P-116 Method III

LEVEL B - Same as level A

CLEANING - MIL-P-116, C-1

DRYING - MIL-P-116

PACKING

LEVEL A - MIL-STD-2073 - 1A

LEVEL B - MIL-STD-2073 - 1A

MARKING MIL-STD-129

NOTES:**STEPS REQD**

1 1 Wrap Mil-P-17667 20 X 40

2 1 Tape A-A-883 3/4 X 48

* 3 2 PPP-F-320, Class Dom.

Fibreboard Pad 12 X 12 X 1

4 1 Container. PPP-B-636, BSC, W5C

12 X 12 X 7

5 2 Tape PPP-T-60, Type IV, Class 1

2 X 19

* Top & Bottom Fibreboard Pads should have a 10-inch diameter hole die-cut in the center. PPP-C-1752 Polyethylene Foam acceptable alternate cushioning material.



SP1 MD. 100-266-1051

COMPUTER GENERATED

SPECIAL PACKAGING INSTRUCTION		CODE ID 98747	SPI NO. (TPO) 100-244-1051
ITEM NOMENCLATURE WHEEL ASSEMBLY		SHEET 2 OF 7	
CAUTION NOTICES			
<p>NOTICE 1: ANY WHEEL THAT HAS A HEAT SHIELD THAT PROTRUDES PAST THE EDGE OF THE WHEEL MUST HAVE A FIBERBOARD RELIEF PAD MADE TO ACCOMMODATE THE SHIELD EQUAL TO REF -5 SUPPORT AND FILLER PADS.</p>			
EUROPEAN UNION (EU) REQUIREMENTS NOTICES			
<p>NOTICE 2: LUMBER AND PACKAGING/CONTAINER STATEMENT - "ALL WOODEN LUMBER AND WOOD CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.</p>			
<p>NOTICE 3: WOODEN PALLET STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.</p>			
<p>NOTICE 4: HARDWOOD SPECIES STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OF NON-MANUFACTURED HARDWOOD SPECIES SHALL BE IDENTIFIED BY A PERMANENT MARKING OF "NC" (NON-CONIFEROUS), 1.25 INCHES OR GREATER IN HEIGHT, ACCOMPANIED BY THE CAGE CODE OF THE CONTRACTED MANUFACTURER AND THE MONTH AND YEAR OF THE CONTRACT. ON PALLETS, THE MARKING SHALL BE APPLIED TO THE STRINGER OR BLOCK ON OPPOSITE SIDES AND ENDS OF THE PALLET AND BE CONTRASTING AND CLEARLY VISIBLE."</p>			
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SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPO) F00-244-1051															
ITEM NOMENCLATURE WHEEL ASSEMBLY		SHEET 3 OF 7															
<p>NOTES</p> <ol style="list-style-type: none"> 1. INSPECT WHEEL TO INSURE RACE HAS BEEN CLEANED AND PRESERVED BY THE MAINTENANCE ACTIVITY IN ACCORDANCE WITH REQUIREMENTS OF T.O. 4W-1-61. 2. PLACE ASTM-D4727, TYPE CF, CLASS DOMESTIC, VARIETY 1W, GRADE 200, FIBERBOARD PAD CUT TO THE INSIDE LENGTH AND WIDTH OF THE CONTAINER INTO THE BOTTOM OF THE CONTAINER. PLACE BARRIER MATERIAL WITHIN THE CONTAINER. BARRIER MATERIAL MUST BE IN ACCORDANCE WITH METHOD 20 REQUIREMENTS OF MIL-STD-2073. PLACE WHEEL IN CONTAINER AND FOLD BARRIER MATERIAL OVER TOP OF WHEEL. PLACE ANOTHER ASTM-D4727, TYPE CF, CLASS DOMESTIC, VARIETY 1W, GRADE 200, FIBERBOARD PAD CUT TO INSIDE LENGTH AND WIDTH OF CONTAINER ON TOP OF WHEEL. CLOSE AND SECURE. 3. THE APPROPRIATE SHIPPING CONTAINER WILL BE SELECTED FROM THE FOLLOWING CRITERIA: <ul style="list-style-type: none"> BA-> LEVEL A SHIPMENTS, REGARDLESS OF WEIGHT, WILL BE PACKED IN CLEATED PLYWOOD BOXES CONFORMING TO ASTM-D8251. STYLE OF CONTAINER SHALL BE DETERMINED BY THE WEIGHT OF THE WHEEL. WHEN THE GROSS WEIGHT EXCEEDS 200 LBS, 3 X 4 NOMINAL SKIDS CONFORMING TO ASTM-D6199, CLASS 2 WILL BE MOUNTED TO THE BOTTOM OF THE CONTAINER. BE-> LEVEL B SHIPMENTS, CONTAINERS CONFORMING TO ASTM-D5118 SHALL BE USED AS FOLLOWS: <table border="0"> <tr> <td>UP TO 65 LBS</td> <td>-----</td> <td>GRADE W5C</td> </tr> <tr> <td>65 TO 90 LBS</td> <td>-----</td> <td>GRADE V15C</td> </tr> <tr> <td>90 TO 120 LBS</td> <td>-----</td> <td>GRADE V13C</td> </tr> <tr> <td>120 TO 160 LBS</td> <td>-----</td> <td>GRADE V11C</td> </tr> </table> <p>CONTAINERS CONFORMING TO ASTM-D5168-95 SHALL BE USED AS FOLLOWS:</p> <table border="0"> <tr> <td>160 LBS AND UP</td> <td>-----</td> <td>GRADE 1100 TW</td> </tr> </table> BC-> SHIPPING CONTAINERS SELECTED WILL NOT BE MORE THAN 1 INCH LARGER THAN THE OUTSIDE DIMENSION OF THE WHEEL. WHEN THIS OCCURS, FIBERBOARD FILLER CONFORMING TO SW, CR 200, WILL BE USED TO INSURE A SNUG FIT. CARE SHALL BE TAKEN TO PREVENT CONTAINER DISFIGURATION (E.G. BULGING, ETC). 4. ON SHIPMENTS OF F-111 WHEELS, PLACE "WASHER" ON CYLINDER PRIOR TO INSERTING THROUGH WHEEL. OUTSIDE DIAMETER OF "WASHER" WILL BE 8 INCHES WITH 5/8 INCH DIAMETER HOLE. PLACE ANOTHER "WASHER" OVER SHOULDER ON NUT PRIOR TO INSTALLING NUT ON CYLINDER. THIS WASHER WILL HAVE 6 3/4 INCH OUTSIDE DIAMETER WITH 5 1/8 INCH DIAMETER HOLE. TIGHTEN NUT UNTIL BOTH "WASHER" ARE HELD SNUGLY IN PLACE. BOTH "WASHER" WILL BE 5/8 VENEER, PAPER OVERLAIN, PP-V 205 OR 1/2 PLYWOOD, A-A-65057, TYPE A. 5. NOTE 4 WILL NOT APPLY TO SHIPMENTS OF F-111 WHEELS MINUS CONE AND BEARINGS. 6. PRESERVATIVE SHOULD BE APPLIED TO BEARING CUP, RACE AND BEARING IF THEY ARE PRESENT. 7. COVER BEARING OPENINGS WITH REF -3, RACE COVERS AND REF -4, TAPE. 8. PACKAGING LEVEL A, ASTM-D8251, CONTAINERS WILL BE LINED WITH SINGLE WALL FIBERBOARD EQUAL TO ASTM-D4727, TYPE CF, CLASS DOM, VAR SW, GRADE 200, TO PROTECT THE WHEELS FROM THE CONTAINER. 9. FILL VOIDS WITH FIBERBOARD EQUAL TO REF -5. 10. WHEELS PACKED IN PREVIOUS EDITIONS OF THIS SPI DO NOT REQUIRE REPACKING IF THE INTEGRITY OF THE PACK HAS NOT BEEN COMPROMISED. 			UP TO 65 LBS	-----	GRADE W5C	65 TO 90 LBS	-----	GRADE V15C	90 TO 120 LBS	-----	GRADE V13C	120 TO 160 LBS	-----	GRADE V11C	160 LBS AND UP	-----	GRADE 1100 TW
UP TO 65 LBS	-----	GRADE W5C															
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SPECIAL PACKAGING INSTRUCTION				CODE ID 98747	SPI NO. (TPID) F00-244-1051	
ITEM NOMENCLATURE WHEEL ASSEMBLY					SHEET 4 OF 7	
AIRCRAFT WHEELS						
NSN	ITEM WT	ITEM DIMENSIONS	CON TYP	CON INSIDE DIMENSIONS	PK WT	AIRCRAFT
1630-00-125-7194	25	11 X 11 X 12		15 X 15 X 12 FMS	30	C-7 A MAIN
1630-00-139-8476	32	15 X 15 X 7 1/2	FB	16 X 16 X 8	39	F-5 MAIN
1630-00-157-6723	104	47 X 47 X 18		47 X 47 X 19	120	F-111 MAIN
1630-00-169-6990	15	10 X 10 X 7		12 X 12 X 7 1/2	13.8	M H-3 HEL
1630-00-188-4084	75	49 X 49 X 17		49 X 49 X 18	105	C-5 W HLT
1630-00-280-5155	30	26 X 26 X 10		26 X 26 X 10 1/2	35	M H-53 HEL
1630-00-328-8304	23	28 X 28 X 8 1/2		28 X 28 X 9	30	T-39
1630-00-406-3990	30	15 X 15 X 7		16 X 16 X 8	35	T-33 FMS
1630-00-832-9087	104	47 X 47 X 18		47 X 47 X 19	120	F-111 MAIN
1630-00-867-3207	30	38 X 38 X 11		38 X 38 X 11 1/2	35	KC-135 U/W
1630-00-903-2923XW		NO INFORMATION		25 1/2 X 25 1/2 X 19 FMS	163	C-119
1630-00-913-9677	12	13 1/2 X 13 1/2 X 4 1/2		14 X 14 X 4 1/2	13	T-38 MAIN
1630-00-945-9255XW	165	23 1/2 X 23 1/2 X 16	WB	25 X 25 X 19 FMS	340	C-123
1630-01-009-0474	62	46 X 46 X 16		46 X 46 X 17	65	E-3 MAIN
1630-01-010-9337	48	18 1/2 X 18 1/2 X 12		20 X 20 X 12	70	E-3 A NOSE
1630-01-041-6012	32	15 X 15 X 7 1/2	FB	16 X 16 X 8	39	F-5 MAIN
1630-01-055-5056	32	15 X 15 X 7 1/2	FB	16 X 16 X 8	39	F-5 E MAIN
1630-01-225-1893	96	21 1/2 X 21 1/2 X 11 1/2	FB	22 X 22 X 12	104	F-15 SUB F M
1630-01-242-7809	35	46 X 46 X 8		46 X 46 X 9	40	E-3
1630-01-252-3593	48	16 1/2 X 16 1/2 X 8 1/2	FB	ABSOLUTE	65	F-16 M BL40
1630-01-294-7958	30	38 X 38 X 11		38 X 38 X 11 1/2	35	KC-135 NOS
1630-01-330-4860	51	16 1/2 X 16 1/2 X 8	FB	17 1/2 X 17 1/2 X 9 1/2	54	F-16 M BL50
1630-01-366-4996	96	21 1/2 X 21 1/2 X 11 1/2	FB	22 X 22 X 12	104	F-15 SUB E M
1630-01-408-0315	96	21 1/2 X 21 1/2 X 11 1/2	FB	22 X 22 X 12	104	F-15 M MAIN

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPD) F00-244-1051
ITEM NOMENCLATURE WHEEL ASSEMBLY		SHEET 5 OF 7

ATTACHMENT I

SPECIAL CONDITIONS AUTHORIZATION

UNDER NORMAL CONDITIONS AIRCRAFT TIRES AND WHEELS SHOULD NEVER BE SHIPPED TOGETHER. HOWEVER, THERE ARE SPECIAL CONDITIONS IN THE FIELD WHEN SHIPPING TIRES AND WHEELS AS AN ASSEMBLY IS NECESSARY TO ACCOMPLISH MISSION REQUIREMENTS. THIS AUTHORIZATION IS TO ACCOMMODATE THOSE MISSION ESSENTIAL NEEDS. WHEN WHEELS AND TIRES ARE ASSEMBLED IT IS RECOMMENDED THE TOTAL RATED PRESSURE BE REDUCED BY 15-20% (LEAVING 80-85%) OF THE MAXIMUM RATED PRESSURE. THIS REDUCTION IN TOTAL PRESSURE IS RECOMMENDED AND NOT MANDATORY. NEVER INFLATE TIRES OVER THE MAXIMUM RATED PRESSURE. WHEN SHIPPING TIRE AND WHEEL ASSEMBLIES THEY MUST BE SECURED AT ALL TIMES AND THE HAZARD OF BEING UNDER PRESSURE MUST BE IDENTIFIED. PROTECTIVE PROCEDURES TO BE USED WHEN SHIPPING AIRCRAFT TIRE AND WHEELS AS ASSEMBLIES ARE AS FOLLOWS:

1. SHIPPERS AND CARRIERS ARE RESPONSIBLE TO ENSURE TIRE AND WHEEL ASSEMBLIES ARE PROPERLY PREPARED AND PROTECTED FOR SHIPMENT. WHENEVER POSSIBLE, TIRE AND WHEEL ASSEMBLIES WILL BE PACKED, SHIPPED AND/OR STORED IN A VERTICAL POSITION (ON THE TREAD). WHEN SHIPPING TIRE AND WHEEL ASSEMBLIES VERTICALLY (ON THE TREAD) PLACE FIBERBOARD SEPARATORS BETWEEN EACH ASSEMBLY. THIS IS TO ELIMINATE ANY CHAFING AND DAMAGE THAT MAY BE CAUSED BY METAL TO METAL CONTACT OF THE WHEELS. IF THE WHEELS HAVE HEAT SHIELDS THAT EXTEND PAST THE EDGE OF THE WHEELS FIBERBOARD RELIEF PADS MUST BE USED TO INSURE THE HEAT SHIELDS ARE NOT CRUSHED. THE CONTAINER DESIGNED FOR TIRES ARE TO BE USED WITH THESE CHANGES: IF THE WHEELS ASSEMBLED WITH THE TIRES ARE TOO WIDE FOR THE CONTAINER, REDUCE THE QUANTITY BY ONE AND FILL THE VOID WITH A SUITABLE FILLER. THIS FILLER CAN BE A FALSE END THAT IS ADEQUATELY SUPPORTED. WHEEL AND TIRE ASSEMBLIES SHOULD NOT BE SHIPPED HORIZONTALLY, IF AT ALL POSSIBLE. IF YOU HAVE NO OTHER OPTION BUT TO SHIP THEM HORIZONTALLY THEY WILL NOT BE STACKED. YOU MUST SHIP ONLY ONE ASSEMBLY TO A CONTAINER. TIRE AND WHEEL ASSEMBLIES MAY BE SHIPPED HORIZONTALLY (ON SIDEWALLS) WITH THESE PROVISIONS: TIRE AND WHEEL ASSEMBLIES THAT ARE SHIPPED HORIZONTALLY MAY BE EASILY DAMAGED. THIS DAMAGE MAY RESULT WHEN SIDEWALLS CONTACT ANY SHIPPING SURFACE THAT MAY GUDGE, CUT OR PUNCTURE THE TIRE OR DENT THE WHEEL. THE TIRE CAN NOT PROTRUDE PAST THE SHIPPING SURFACE SUCH AS A PALLET. WHEN TIRE AND WHEEL ASSEMBLIES ARE SHIPPED HORIZONTALLY THE SHIPPER MUST ENSURE THE PROTECTION OF ALL PARTS OF THE TIRE AND WHEEL. THIS MAY REQUIRE RELIEF FOR HEAT SHIELDS TO PREVENT CRUSHING. AS THE HEAT SHIELD EXTENDS PAST THE EDGE OF THE WHEEL, THEN THAT HEAT SHIELD NEEDS TO BE PROTECTED AT ALL TIMES. IN ADDITION, WHEN TIRE AND WHEEL ASSEMBLIES ARE SHIPPED HORIZONTALLY, THE TIRE SIDEWALLS MUST BE PROTECTED FROM DAMAGE BY THE USE OF A PROTECTIVE SHEET OF FIBERBOARD BETWEEN THE TIRE AND WHEEL ASSEMBLY AND THE CONTAINER TO ELIMINATE ANY DAMAGE. SHIPPERS MUST ENSURE TIRE AND WHEEL ASSEMBLIES ARE NOT SHIPPED HORIZONTALLY IF THEY WILL BE DAMAGED IN ANY WAY.

2. NO TIRES OVER 40 INCHES MAY BE SHRINK-WRAPPED OR SHIPPED ON A STANDARD 48 X 40 PALLET. WHEN POSSIBLE, FABRICATE CUSTOM PALLETS LARGE ENOUGH TO ACCOMMODATE THE SIZE OF THE WHEEL AND TIRE ASSEMBLIES. TIRES MAY NOT HANG OVER THE EDGE OF A PALLET. THE USE OF A TOP AND BOTTOM SHEET OF FIBERBOARD IS RECOMMENDED. USE OF A TOP SHEET OF FIBERBOARD DURING WRAPPING WILL WATERPROOF THE PALLETIZED TIRE. THE BOTTOM SHEET PROTECTS THE TIRES FROM THE PALLET. PVC (STRETCH WRAP) FILMS SHOULD NOT BE USED, AS THESE LOOSEN AT HIGH TEMPERATURES AND COULD AFFECT THE STABILITY OF THE TIRE. THIS MEETS MILITARY STANDARDS FOR SERVICEABLE AND UNSERVICEABLE METHODS OF PRESERVATION. IT IS RECOMMENDED THAT UPON ARRIVAL AT THEIR DESTINATION, A/C TIRE AND WHEEL ASSEMBLIES BE UNWRAPPED IMMEDIATELY AND STORED VERTICALLY (ON THEIR TREADS). IF THE TIRE AND WHEEL ASSEMBLIES ARE TO BE RESHIPED WITHIN A SHORT PERIOD OF TIME THEY MAY BE LEFT PALLETIZED.

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747	SPI NO. (TPD) F00-244-1051
ITEM NOMENCLATURE WHEEL ASSEMBLY		SHEET 6 OF 7
<p style="text-align: center;">ATTACHMENT I - CONTINUED</p> <p>3. SHIPPERS MUST ENSURE SHIPPING SURFACES ARE FREE FROM ANYTHING THAT COULD DAMAGE THE TIRES AND WHEELS. ANY SHARP OR PROTRUDING OBJECTS CAN EASILY DAMAGE TIRES (E.G., NAILS, WOOD SLIVERS, ETC.). PRIOR TO PUTTING MATED TIRE AND WHEEL ASSEMBLIES IN ANY CONTAINER, TRUCK, TRAILER, RAIL CAR, ETC., AND ON PALLETS, ALL SURFACES WILL BE INSPECTED TO INSURE NOTHING WILL PUNCTURE OR DAMAGE THE TIRES AND WHEELS. WHEN SURFACES ARE IN SUCH CONDITION THAT THEY CAN CAUSE DAMAGE TO THE TIRES AND WHEELS THEY MUST BE LINED TO PROTECT THE TIRES AND WHEELS. DO NOT SHIP TIRE AND WHEEL ASSEMBLIES NEXT TO, ON TOP OF, OR UNDER ANY MATERIAL THAT COULD CAUSE DAMAGE TO THE TIRES AND WHEELS.</p> <p>4. WHEN TIRE AND WHEEL ASSEMBLIES ARE UNIT PACKED IN QUANTITIES OF MORE THAN ONE, THEY SHALL BE SEPARATED BY A FIBERBOARD DIVIDER THAT WILL SEPARATE METAL TO METAL COMPONENTS WITHOUT DAMAGE TO THE TIRES AND WHEELS. ALSO, THE QUANTITIES OF EACH PACK MAY VARY DEPENDENT UPON SIZE OF THE ASSEMBLIES AND MAY NOT MATCH THE DRAWINGS ON THIS SPI.</p> <p>5. THIS POLICY HAS BEEN CREATED TO ENSURE ALL FORWARD READINESS SPARES PACKAGES (RSP) SUPPORTED LOCATIONS AND FORWARD SUPPLY LOCATIONS (EN-ROUTE), THAT ROUTINELY RECEIVE AND SHIP MISSION ESSENTIAL FORWARD ASSEMBLIES, ARE BEING EXPEDITIOUSLY MOVED TO SUPPORT ALL AIR COMMAND TASKED MISSIONS. ANY QUESTION OR CONCERNS REGARDING THIS POLICY SHOULD BE ADDRESSED TO THE PROPER MANAGING AIR LOGISTICS COMMAND (ALC).</p>		

